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CREDIT OPINION
11 October 2019

Update

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RATINGS

Deutsche Bahn AG

Domicile	Berlin, Germany
Long Term Rating	Aa1
Type	LT Issuer Rating - Dom Curr
Outlook	Negative

Please see the ratings section at the end of this report for more information. The ratings and outlook shown reflect information as of the publication date.

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Deutsche Bahn AG

Update following change in outlook and proposed hybrid issuance

Summary

Deutsche Bahn AG's (DB) Aa1 issuer rating incorporates a three-notch uplift from its a1 Baseline Credit Assessment (BCA), reflecting the high support and dependence between the company and the Federal Republic of Germany (Aaa stable).

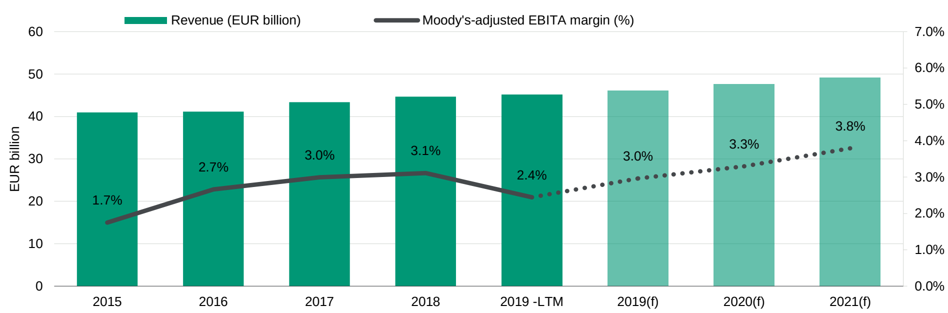
The a1 BCA is very weakly positioned because of a number of challenges, particularly in terms of profitability as evidenced by very low margins (Moody's Adjusted EBITA margin of 3.1% in 2018), very high Moody's gross adjusted leverage (forecasted to be close to 7.0x in 2019) and negative free cash flow (FCF, an annual deficit of around €2 billion), which reflects increasing investments and operational challenges. We expect mid-single digit revenue growth and improving operating efficiency to drive a gradual strengthening in Moody's gross adjusted leverage towards 5.5x over the next 12 to 18 months such that the company will ultimately reach leverage of around 5.5x by 2021 from the high point of around 7.0x expected at the end of 2019. This leverage is higher than we previously anticipated because of financing activities.

DB's BCA is supported by the company's size, geographical diversification and leading global market position, as well as the predictability of the legal framework for railway companies in Germany and the stable environment in which the company operates in its domestic market.

Exhibit 1

Low profit margin remains DB's main credit challenge

Moody's-adjusted revenue (in € billions) and EBITA margin (%)



All figures and ratios are calculated using Moody's estimates and standard adjustments. Moody's Forecasts (f) are Moody's opinion and do not represent the views of the issuer. Periods are fiscal year-end unless indicated otherwise.
Source:Moody's Financial Metrics™

Credit strengths

» Solid business profile, supported by a predictable operating environment given the ability of the regulations and subsidies that the company receives

» No changes expected in our assumptions of government support and default dependence

Credit challenges

» Continued pressure on profitability

» Strained FCF generation because of an intense capital spending programme

» Very high leverage for the rating category

Rating outlook

The negative outlook on DB's rating reflects our expectation that the company's leverage will increase to around 7.0x in fiscal 2019 and that the company will have to reduce leverage towards 5.5x, a level which is more commensurate with the current a1 bca. To achieve this deleveraging the company will need to sustainability grow its revenues and earnings, which could be a challenge.

Factors that could lead to an upgrade

An upgrade is unlikely given the company's weak positioning in the Aa1 rating category. Moreover DB's rating is one notch lower than the sovereign rating, and we expect this gap to remain because we do not expect any strengthening in government support beyond the current high level, nor do we expect any change in our dependence assumption.

The BCA would most likely come under upward pressure if:

» there is an improvement in DB's operating performance, with its Moody's-adjusted EBITA margin exceeding 6% on a sustained basis

» DB's Moody's-adjusted debt/EBITDA remains well below 5.0x on a sustained basis

Factors that could lead to a downgrade

DB's Aa1 issuer rating is sensitive to any weakening in the likelihood of support from the German federal government, which we expect to remain high, given the constitutional framework and the importance of DB to the German economy and the central role DB is expected to play in achieving the government's CO2 reduction targets for the transportation sector in Germany.

In addition, any further weakening in the BCA could result in a downgrade of the Aa1 rating. This weakening could be caused by the following factors:

» A failure to improve the company's operating performance from current levels, with its Moody's-adjusted EBITA margin remaining below 4.5%

» Moody's-adjusted debt/EBITDA failing to decrease towards 5.5x from around 7.0x forecast in 2019

» A weakening of the company's business profile, resulting from a change in its integrated business model, with a separation of its rail and logistics business from its infrastructure management activities

» A major decline in government infrastructure subsidies, which would increase the burden of infrastructure capital spending for the company

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moodys.com for the most updated credit rating action information and rating history.

Key indicators

Exhibit 2
Deutsche Bahn AG

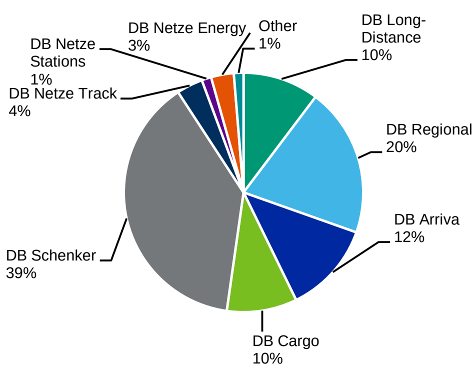
	31/12/2015	31/12/2016	31/12/2017	31/12/2018	30/06/2019 (L)	31/12/2019 (f)	31/12/2020 (f)
Revenue ($ Billion)	$ 45.5	$ 45.5	$ 49.0	$ 52.3	$ 52.8	$ 53.8	$ 55.7
EBITA Margin	1.7%	2.7%	3.0%	3.1%	2.4%	3.0%	3.7%
EBITA / Average Assets	1.2%	1.8%	2.1%	2.2%	1.7%	2.2%	2.7%
Debt / Book Capitalization	69.0%	71.7%	68.8%	71.2%	72.8%	68.6%	68.4%
Debt / EBITDA	6.2x	6.4x	5.7x	6.2x	7.2x	6.9x	6.2x
FCF / Debt	-4.8%	-1.1%	-6.9%	-3.9%	-5.5%	-9.3%	-6.3%
RCF / Net Debt	20.8%	18.7%	20.8%	18.4%	16.1%	13.1%	14.8%
(FFO + Interest) / Interest Expense	7.5x	7.6x	7.9x	7.6x	7.8x	6.7x	7.5x

All figures and ratios are calculated using Moody's estimates and standard adjustments. Moody's Forecasts (f) are Moody's opinion and do not represent the views of the issuer. Periods are fiscal year end unless indicated. H1 2019 is affected by the application of IFRS 16.
Source: Moody's Financial Metrics™

Profile

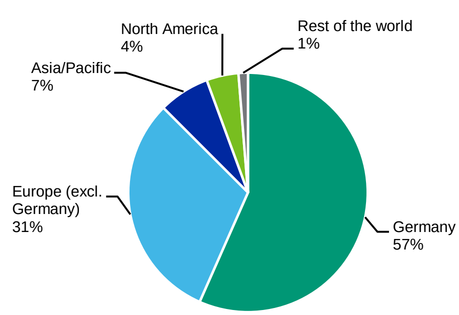
Deutsche Bahn AG (DB) is a vertically integrated rail and logistics group that owns and operates the German national rail transportation network. DB is one of the largest rail and logistics companies in the world. In 2018, DB generated €44 billion of revenue and €4.5 billion of reported EBITDA. The company includes rail track infrastructure, and passenger and freight transportation services under its holding umbrella. DB holds leading market positions in most of the segments in which it operates. These segments include long-distance rail (10% of revenue), regional passenger rail in Germany (20%), mass-transit transportation services through its subsidiaries DB Arriva (12%) and DB Cargo (10%), logistic services through its subsidiary DB Schenker (39%), and railway stations and infrastructure management (8%).

Exhibit 3
Revenue breakdown by segment
2018



External revenue.
Source: Company report

Exhibit 4
Revenue breakdown by region
2018



External revenue.
Source: Company report

Recent Developments

» On 20 September 2019 the German government announced a set of measures supporting DB as part of its new climate action programme 2030. These measures are described below in detail.

» On 10 October 2019, DB announced that it is planning to issue Undated Subordinated Resettable Fixed Rate Notes (junior subordinated “Hybrid”) through its subsidiary Deutsche Bahn Finance GmbH. We rated the Hybrid A2, one notch lower than DB’s a1 BCA and four notches lower than the company's Aa1 long-term issuer rating. The Hybrid has equity-like features that allow it to receive basket 'C' treatment (i.e 50% equity and 50% debt) for the purpose of adjusting financial statements. Please refer to Moody's Rating Methodology “Hybrid Equity Credit” (January 2017) for further details.

Detailed credit considerations

Low profitability will remain a key credit concern

DB’s weak profitability remains our main credit concern. We expect its Moody's-adjusted EBITA margin to remain broadly flat in 2019 at around 3.0%.

In recent years DB's profitability has been hurt by (1) weak performance in the rail freight division (DB Cargo); (2) increasing competition, particularly in the regional rail services business, with some of DB's existing contracts awarded to its competitors, which exerted significant pressure on its prices and volumes; and (3) cost increases for personnel and energy as well as quality improvement measures and digitalisation costs. We expect DB's profitability to remain subdued in 2019 as a result of inflationary pressure on DB's cost structure, as well as additional expenses for quality improvement measures.

Revenue in H1 2019 increased 2.2% compared with H1 2018, supported by volume and price growth in all divisions. However, in the 12 months ended June 2019, the company's Moody's-adjusted EBITA margin decreased to 2.4%. We expect some recovery of margins in H2 2019, supported by revenue growth and improved absorption of overhead costs and improving performance of the DB Cargo business.

High and increasing capital spending will keep leverage high for the BCA and strain FCF, deleveraging expected

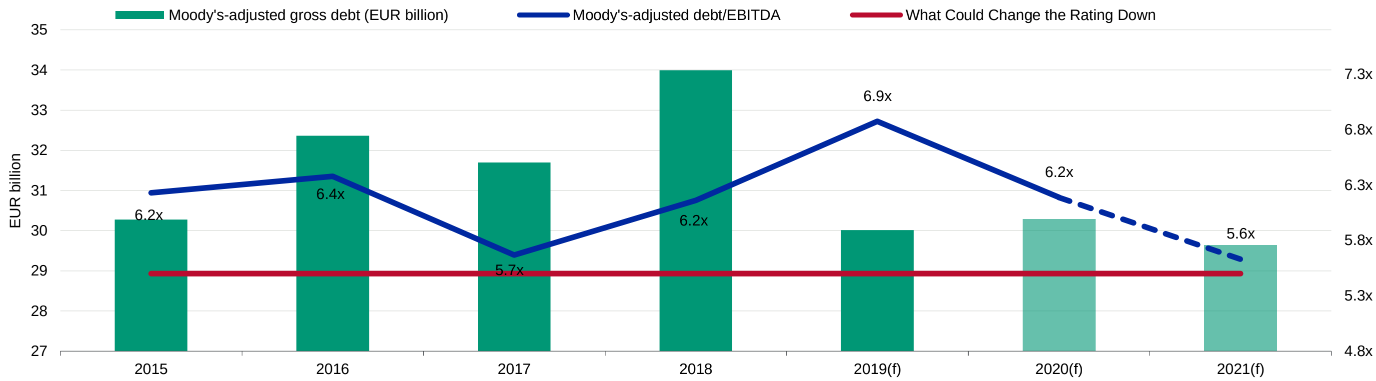
We expect mid-single digit revenue growth, improving operating efficiency and a gradual reduction in gross debt such that there will be a gradual strengthening in the leverage such that the leverage will ultimately reach 5.5xin 2021 from the high point of around 7.0x expected in 2019. This deleveraging will be driven by a combination of increased passenger and cargo traffic, a focus on the company’s cost base and by regular equity injections, which will limit the need to increase the group’s financial debt going forward.

We also expects DB to complete the sale of its subsidiary Arriva within the next 12-18 months and we expect the funds will not be distributed outside the DB group. The proceeds from this disposal will improve the company’s liquidity and net debt though also lead to a reduction in absolute EBITDA (Arriva’s EBITDA was €575 million in 2018) and partially weaken the geographical diversification of the group.

Exhibit 5

Leverage will remain high for the BCA which is very weakly positioned

Moody's-adjusted gross debt (in € billions) and debt/EBITDA



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Source: Moody's Financial Metrics™

We expect the company's net debt to remain under pressure in the next 12-18 months from the ongoing FCF deficit (around €2.1 billion in 2019). Ongoing cash flow deficits are due to the company's high capital spending requirements, averaging around €5.5 billion per annum (including a €1 billion IFRS 16 impact), and the company's ongoing dividend payment of around €0.6 billion. The FCF deficit will be reduced by €1 billion capital injections per annum from 2020 to 2030 from the government, as part of the recently announced climate action program.

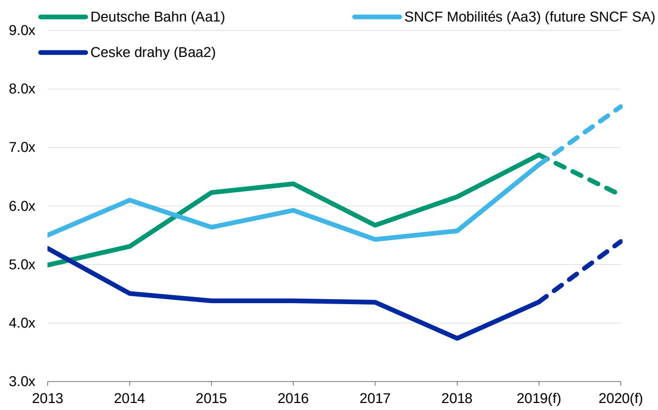
Integration with infrastructure is credit positive

DB's weak leverage and FCF coverage are largely driven by the company's vertically integrated business model and substantial investment needs in rail track infrastructure and in rolling stock. This set-up is unusual in the European rail operators market, where the infrastructure and rail operating businesses are mostly managed and run separately. We believe that the combination of the two businesses provides DB with an advantage, given the breadth of its operations. Therefore, DB can accommodate higher leverage in the a1 category than pure rail operators such as Ceske drahy, a.s. (long-term rating Baa2 stable, BCA ba2). SNCF Mobilités (to be renamed SNCF SA, long-term rating Aa3 stable, BCA a3) is DB's closest peer following the announced integration of the infrastructure manager SNCF Réseau's (Aa2 positive) monopolistic activities. SNCF Mobilités' lower BCA reflects the higher leverage of the company and the risks related to the upcoming liberalisation of the passenger railway market in France.

Exhibit 6

DB's leverage is one of the highest among its European peers, but is considered more sustainable given integration with the company's infrastructure activities

Adjusted debt/EBITDA

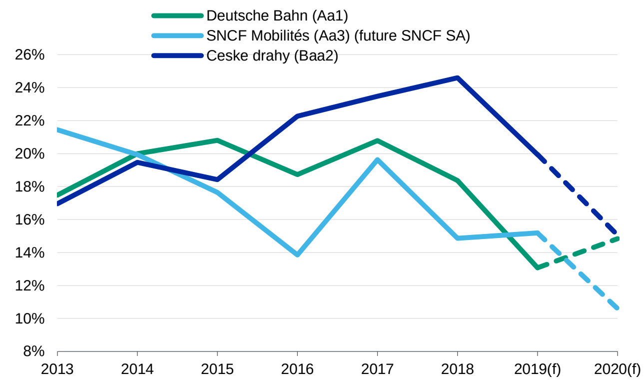


*Increase in SNCF's leverage in 2018 was mainly because of the impact of strikes on EBITDA.

Source: Moody's Financial Metrics™

Exhibit 7

Retained cash flow/net debt is likely to remain in the mid to high teens (in percentage terms) and weaken over the next 12-18 months



Source: Moody's Financial Metrics™

Solid business profile, supported by a predictable operating environment

We consider DB's operating environment in Germany to be stable and supportive of the company's credit quality. Germany has set the pace for rail sector liberalisation. For this purpose, the government has put in place a stable legal framework, entailing (1) the government's constitutional obligation to provide a functional rail infrastructure, implying that it will sustain most of the investments in infrastructure; (2) the budgeting of funds in the medium-term planning process for regional transportation; and (3) the existence of a performance and financing agreement between DB and the federal government, with well-defined quality levels.

As a result of the opening of the German rail sector to competition, DB's market shares in both passenger transport and rail freight have been declining gradually. However, this decline has been 1%-2% per year (based on our analysis and external market research) and, in the passenger segment, has been offset by an increase in the absolute number of passengers, and is, therefore, manageable. Moreover, DB's business profile is supported by its large size and broad diversification by both business segment (rail and bus passenger transport, rail freight, logistics and rail infrastructure) and geography (around 43% of revenue in 2018 was generated abroad, including 31% in Europe [excluding Germany], 7% in Asia-Pacific and 4% in North America, mainly in the cargo and logistics businesses, and from DB Arriva).

DB's business profile is also underpinned by its leading market positions. DB is the market leader in the European rail freight business and is the second-largest passenger railway operator after SNCF Mobilités. In addition, DB is one of the leading groups in European land transport, air freight, ocean freight and contract logistics.

Increased importance of DB to achieve the government's CO2 reduction targets in the transportation sector in Germany

We highlight the increased importance of DB to achieve the government's CO2 reduction targets in the transportation sector in Germany. This is evidenced by measures being implemented by the government as part of its new climate action programme 2030, published on 20 September 2019. These measures include direct support to DB through €1 billion capital injections per annum from 2020 to 2030. Government support will also come from indirect measures to stimulate the switch from air and road to rail travel through VAT reductions for passenger railways and surcharges to domestic air travel. Measures have also been implemented to prevent airlines price dumping and higher taxation for vehicles based on their CO2 emissions.

Given DB's 100% ownership by the German government, we apply our Government-Related Issuers rating methodology for the company. Therefore, DB's rating reflects a combination of the following inputs:

» A BCA of a1

» The Aaa domestic-currency rating of the Federal Republic of Germany

» The high default dependence between DB and the government

» The high probability of support from the government

Our assessment of a high default dependence between DB and the German government reflects: (1) Germany's status as a key hub of European rail traffic, and (2) the strong integration of railway infrastructure into the international economy and trade flow. These factors are balanced by (1) DB's geographical diversification, mainly via its international logistics and freight-forwarding activities; and (2) the increasing presence of the company's rail freight activities in neighbouring European rail markets.

Our expectation that the government will provide DB with a high level of support in case of need is based on: (1) the constitutional requirement that the government remains the owner of rail infrastructure in the country and is responsible for ensuring that it is functional; (2) DB's 100% state ownership; (3) the strategic importance of a functioning, well-funded rail infrastructure for Germany's economy; (4) an overall strong political consensus regarding the public role of DB and the importance of its activities for the German economy; and (5) DB's dominant role as a regional transport provider, in addition to its de facto monopoly in the long-distance passenger rail segment.

Environmental, social and governance considerations

We take into account the impact of environmental, social and governance (ESG) factors when assessing companies' credit quality. In the case of DB, the main ESG-related drivers are the following:

» Shift to greener forms of transport supports DB's volume growth. Passenger railways tend to be environmentally clean and highly energy efficient. With about 60% of rail lines electrified in Germany (including roughly all of the main lines) as of December 2018, rail transport produces lower emissions than alternative transport such as air, bus or car travel. Passenger railway volumes will be driven by increasing awareness among travelers as well as government or local authorities' incentives to choose public transportation. On the other hand, DB's ongoing effort to reduce its environmental impact will continue to strain the company's cash flow.

» The government as part of its new climate action programme 2030, will implement measures that include direct additional support to DB through €1 billion capital injections per annum from 2020 to 2030. Government support will also come from indirect measures to stimulate the switch from air and road to rail travel.

» DB is already experiencing the consequences of climate change. Record temperatures and fiercer storms challenge the company's punctuality and the viability of rail tracks, leading to potential disruption and higher capital spending.

» Social risks stem from the company's high exposure to human capital, with 321,765 employees as of June 2019 and a high number of unionised employees. Passenger railways are highly exposed to the risk of collective bargaining and industrial actions. Strikes can have both reputational and financial consequences. While no major strike action has been recorded in Germany in recent years, the Railway and Transport workers union salary inflation remains high in the next 12-18 months. The new collective agreements with the German Train Drivers' Union, concluded in January 2019, resulted in a 6.1% wage increase over a period of 29 months as well as some benefits for employees.

» DB's corporate governance structure is in line with German law and the articles of association. The supervisory board consists of 20 members and, consistent with the German Codetermination Act (MitBestimmG), includes equal numbers of shareholders and employee representatives. Despite high leverage, DB's financial policy is relatively balanced with a track record of support from the German government.

Liquidity analysis

We expect DB to maintain satisfactory liquidity over the next 12 months, supported by: (1) its cash position of €3.7 billion as of June 2019; (2) its fully available €3 billion commercial paper programme; (3) €2 billion of unused committed credit lines; and (4) its sizeable cash flow from operations, which we expect to be €3.5 billion in 2019. Major cash needs include high capital spending, which we estimate at about €6 billion (including €1 billion IFRS 16 impact) in 2019, net of grants from the German government and around €2.2 billion in debt maturities in the next 12-18 months (until December 2020).

We also expect DB to maintain its excellent access to the capital markets. In addition, our liquidity assessment incorporates our assumption that, in case of need, the company would receive support from the federal government, which would provide timely cash injections. These liquidity injections would go beyond the government's statutory duty to preserve DB's operations from insolvency.

Rating methodology and scorecard factors

DB's BCA of a1 is one notch higher than the grid-indicated outcome of our Global Passenger Railway Companies rating methodology, published in June 2017. The one-notch differential reflects our view that DB can accommodate higher leverage in the a1 category than other rail operators because of its integrated business model, with the railways network and rail operations under one roof.

Exhibit 8
Rating factors
Deutsche Bahn AG

Passenger Railway Industry Grid [1][2]	Current LTM 6/30/2019		Moody's 12-18 Month Forward View As of 9/5/2019 [3]	
Factor 1 : SIZE (15%)	**Measure**	**Score**	**Measure**	**Score**
a) Revenue ($ Billion)	$51.5	Aaa	$53.7	Aaa
b) Number of Passenger Transported (PKM billion)	Aaa	Aaa	Aaa	Aaa
Factor 2 : MARKET POSITION (40%)				
a) Stability of Operating Environment	Aaa	Aaa	Aaa	Aaa
b) Market Characteristics	Aaa	Aaa	Aaa	Aaa
c) Competitive Environment	Aa	Aa	Aa	Aa
Factor 3 : COST POSITION AND PROFITABILITY (15%)				
a) EBITA Margin	2.4%	Caa	3.5%	B
b) EBITA / Avg. Assets	1.7%	B	2.48%	B
Factor 4 : CAPITAL STRUCTURE (15%)				
a) Debt / Book Capitalisation	72.8%	Baa	68.46%	A
b) Debt / EBITDA	7.2x	B	6.4x	B
Factor 5 : CASH FLOW AND INTEREST COVERAGE (15%)				
a) FCF / Debt	-5.5%	B	-7.3%	B
b) RCF / Net Debt	16.1%	Baa	14.3%	Baa
c) (FFO + Interest) / Interest	7.8x	Aa	7.2x	Aa
Rating:				
a) Indicated Rating from Grid		A2		A2
b) Actual Rating Assigned				(P)Aa1
Government-Related Issuer	**Factor**			
a) Baseline Credit Assessment	a1			
b) Government Local Currency Rating	Aaa stable			
c) Default Dependence	High			
d) Support	High			
e) Final Rating Outcome	Aa1 Neg			

(1) All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations.
(2) As of 6/30/2018(L). Source: Moody's Financial Metrics™
(3) This represents Moody's forward view, not the view of the issuer, and unless noted in the text, does not incorporate significant acquisitions and divestitures.
Source:Moody's Financial Metrics™

Appendix

Exhibit 9

Peer comparison

(in US millions)	Deutsche Bahn AG (P)Aa1 Negative FYE Dec-17	Deutsche Bahn AG FYE Dec-18	Deutsche Bahn AG LTM Jun-19	SNCF Mobilites Aa3 Stable FYE Dec-17	SNCF Mobilites FYE Dec-18	SNCF Mobilites LTM Jun-19	Ceske drahy, a.s. Baa2 Stable FYE Dec-17	Ceske drahy, a.s. FYE Dec-18	Ceske drahy, a.s. LTM Dec-18
Revenue	$48,985	$52,784	$51,505	$35,965	$37,412	$38,095	$1,460	$1,801	$1,801
EBITDA	$6,318	$6,517	$5,524	$4,127	$3,986	$4,414	$389	$449	$449
EBITA Margin	3.0%	3.1%	2.4%	5.4%	3.6%	4.4%	5.3%	6.3%	6.3%
EBITA / Avg. Assets	2.1%	2.2%	1.7%	4.2%	2.6%	3.2%	2.0%	2.7%	2.7%
FFO + Int Exp / Int Exp	7.9x	7.6x	7.8x	8.0x	7.9x	15.6x	6.6x	7.4x	7.4x
Total Debt/Capital	68.8%	71.2%	72.8%	69.8%	60.2%	61.7%	49.3%	46.6%	46.6%
Debt / EBITDA	5.7x	6.2x	7.2x	5.4x	5.6x	5.0x	4.4x	3.7x	3.7x
FCF / Debt	-6.9%	-3.9%	-5.5%	-1.4%	-6.0%	-6.6%	3.8%	-3.7%	-3.7%
RCF / Net Debt	20.8%	18.4%	16.1%	19.6%	14.9%	15.3%	23.5%	24.6%	24.6%

All figures and ratios calculated using Moody's estimates and standard adjustments. FYE = Financial year-end. LTM = Last 12 months. RUR* = Ratings under review, where UPG = for upgrade and DNG = for downgrade.
Source: Moody's Financial Metrics™

Exhibit 10

Moody's-adjusted debt breakdown
Deutsche Bahn AG

(in US Millions)	FYE Dec-17	LTM Ending Jun-18	FYE Dec-18	LTM Ending Jun-19
As Reported Debt	**26,508.8**	**27,400.2**	**26,571.3**	**33,389.5**
Pensions	4,731.1	4,600.2	5,513.4	5,492.4
Operating Leases	6,376.2	6,311.8	6,179.8	0.0
Securitizations	450.3	437.8	599.0	596.7
Moody's-Adjusted Debt	**38,066.5**	**38,750.0**	**38,863.5**	**39,478.7**

Source: Moody's Financial Metrics™

Exhibit 11

Moody's-adjusted EBITDA breakdown
Deutsche Bahn AG

(in US Millions)	FYE Dec-17	LTM Ending Jun-18	FYE Dec-18	LTM Ending Jun-19
As Reported EBITDA	**5,165.7**	**5,178.6**	**5,348.3**	**5,373.9**
Pensions	9.0	9.5	13.0	12.6
Operating Leases	1,999.9	2,130.6	2,128.0	1,028.0
Unusual	-840.6	-913.8	-957.7	-889.9
Non-Standard Adjustments	-15.8	-9.5	-14.2	0.0
Moody's-Adjusted EBITDA	**6,318.2**	**6,395.5**	**6,517.4**	**5,524.5**

Source: Moody's Financial Metrics™

Ratings

Exhibit 12

Category	Moody's Rating
DEUTSCHE BAHN AG	
Outlook	Negative
Issuer Rating -Dom Curr	Aa1
Senior Unsecured MTN	(P)Aa1
Commercial Paper -Dom Curr	P-1
Other Short Term -Dom Curr	(P)P-1
DEUTSCHE BAHN FINANCE GMBH	
Outlook	Negative
Bkd Senior Unsecured	Aa1
Bkd Commercial Paper -Dom Curr	P-1
Bkd Other Short Term -Dom Curr	(P)P-1

Source: Moody's Investors Service

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